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The Annual Meetings. You are invited and urged to attend the one day session of the Maryland Vegetable Growers' Association at the Lord Baltimore Hotel, Wednesday, January 11, 1939. Come yourself and bring your neighbors with you. It is becoming increasingly important for vegetable growers to get together to discuss their problems and to organize themselves effectively to safeguard their business interests. Your interest and support is needed to this end. The individual is becoming unable to fight his way alone and only by banding together can growers maintain their markets and to prevent unjust restraints.

The program has been set up this year with the idea of presenting subjects of general concern. It is hoped that information relating to the production of particular crops can be presented later to various groups in the producing areas.

PROGRAM OF THE MARYLAND VEGETABLE GROWERS' ASSOCIATION

Lord Baltimore Hotel
January 11th, 1939.

10:00 A. M. Call to Order _____ President Egbert Hawkins.

10:05 A. M. What Can Be Expected of a Vegetable Seed Law, _____ F. S. Holmes, Chief Seed Inspector.

10:50 A. M. Suggestions for Improving the Baltimore Wholesale Fruit and Vegetable Market Situation? _____ S. H. DeVault, Prof. of Agricultural Economics & Farm Management.

11:35 A. M. Report of Committee on Reorganization, _____ F. Ridgely Todd, Chairman.

Appointment of Committees.

Recess.

1:30 P. M. Problems Confronting the Vegetable Grower. _____ Allen G. Waller, Sec-Treas., N.E. Vegetable & Potato Council, New Brunswick, N.J.

2:15 P. M. Do We Need Standardization of Vegetable Packages? _____ C. H. Mahoney, Professor of Horticulture.

3:00 P. M. What the Inspector Finds in the Vegetable Package. _____ Walter C. Beaven, Asst. Prof. Marketing.

Report of Committees.

Adjournment.

NEWS LETTER

Issued by
The Maryland Vegetable Growers' Association,
W. R. Ballard,
Secretary-Treasurer.

Vol. XVI. No. 1.

College Park, Maryland.

January, 1939.

The Annual Meetings. The program was carried out as outlined and the discussions proved to be interesting as well as stimulating. Problems relating to better seed appeared to arouse as much discussion as any other topic. Some of the growers feel that this question should be pushed to the point where more effective regulation can be secured.

The committee on reorganization consisting of F. Ridgely Todd, C. E. Hammond, and R. T. Merritt presented three amendments to the constitution which were unanimously adopted.

The changes in the following articles are underlined:

Article IV.

Section 2. The Executive Board shall consist of the President, Vice-President, the Secretary-Treasurer, three members at large elected by the Association and one director from each of the affiliated organizations.

At the Annual Meeting in January 1939, one of the three members at large shall be elected to serve one year, one to serve two years, and one to serve three years. Thereafter such members at large are to be elected for a term of three years.

Article V.

Section 2. Any local or district vegetable growers organization in the State may obtain membership as a collective group when ten or more members pay an annual fee of fifty cents per member. Such affiliated organization shall be entitled to one director who shall become, ex-officio, a member of the Executive Board.

Article VII.

Section 3. Three members appointed annually by the Executive Board and one member from each of the affiliated organizations shall constitute a Membership Committee. The Secretary shall be chairman of this Committee.

The following officers were elected:

President - Egbert Hawkins, Harmons, Maryland,
Vice-President - James E. Andrews, Hurlock, Maryland,
Secretary-Treasurer, W. R. Ballard, College Park, Maryland,
Directors: H. J. W. Rayner, Salisbury, Maryland, (3 years)
C. C. Phillips, Quantico, Maryland, (2 years)
J. Miles Lankford, Pocomoke, Maryland, (1 year)

Director for Farm Bureau - F. Ridgely Todd, Sparrows Point, Maryland,
Delegate to Farm Bureau - C. E. Hammond, Brooklyn, Maryland,
Director for Agricultural Corporation - Wm. G. Lynch, Dundalk, Maryland,

The great diversity of conditions in Maryland makes it difficult to work out an effective organization of vegetable growers. The change in the constitution sets up machinery whereby local organizations can affiliate with the State Association and have representation on the official board. The scheme is flexible enough so that any type of organization is provided for. In one section it might be a commodity group such as potato growers; in another a county organization might be desired, or a larger regional group could be formed. It is hoped that by this method all interests of the vegetable industry may be adequately represented in dealing with the larger questions affecting the industry.

In this connection President Hawkins appointed F. Ridgely Todd as official representative to attend the sessions of the Northeast Vegetable and Potato Council with C. E. Hammond and H. J. W. Rayner as alternates.

With the development of local affiliated groups, it may be possible eventually to organize educational meetings in the growing sections where they would be more accessible to the growers than the annual meetings in Baltimore which might gradually become more of a business and legislative session. It would be desirable to enlarge the news letter as well as to project other enterprises which would make it more worthwhile for growers to become members of organized groups.

The following resolutions were presented by the committee consisting of F. Ridgely Todd, H. J. W. Rayner, and C. E. Hammond:

BE IT RESOLVED THAT each member be urged to carry back to his local vegetable organization the needs of an active state-wide organization and urge his local to participate fully.

BE IT RESOLVED THAT the Maryland Vegetable Growers' Association request the proper authorities of the University to allocate the necessary land on the new farm for vegetable investigation; to ascertain the best adaptable varieties of vegetables for our different market garden areas,

ALSO that sufficient personnel be made available to bring about the above in a manner that is practical to the grower.

BE IT RESOLVED THAT Maryland State Vegetable Growers' Association have a representative appointed by the President at the regular meetings of the North Eastern Vegetable and Potato Council; that the expenses be borne by the Association and supplemented by the Farm Bureau Federation (when necessary),

BE IT RESOLVED THAT a vote of gratitude be extended to the parties who have contributed to our regular meeting today.

The auditing committee W. N. Eyler and R. T. Merritt reported the Treasurer's books in order with a balance on hand as of December 31, 1938 of \$78.13.

The exhibit of potatoes was generally of high quality. It consisted of 100 entries of white potatoes and 17 of sweet potatoes. There were also 10 displays of promising new seedling white potatoes one or two of which will probably be named and distributed next year. One of these, a cross between Early Rose and Katahdin appears to have value as an early variety, while another selection may be the late potato need to take the place of the Dakota Red. One valuable

characteristic of this seedling is its resistance to late blight which damaged the crop so extensively last season.

The vegetable classes were not very well filled — due no doubt to the fact that the management did not get the word to go ahead until too late for the growers to prepare their exhibits. Another year it may be possible to advertise the exhibit early and to work up sentiment for making an exhibit more in keeping with the size of the industry.

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EIGHTH ANNUAL MARYLAND WHITE AND SWEET POTATO SHOW

Lord Baltimore Hotel, Baltimore, Maryland, January 11-12, 1939

Sponsored by the

Maryland Farm Bureau Federation and Maryland Vegetable Growers Association

Regulations

Each exhibit shall consist of sixteen potatoes. Only one exhibit may be entered in any class.

No entry fee will be charged. One dollar membership fee will be subtracted from premiums of all exhibitors in adult classes who are not members of the Maryland Vegetable Growers Association. Prize winners in the Junior classes will be made honorary members of the Maryland Vegetable Growers Association.

Exhibits may be entered only by the grower and owner of the field in which the tubers were produced.

Exhibits should be sent by prepaid express or parcel post to the State Potato Show, Lord Baltimore Hotel, C/o Doctor R. A. Jenle, Baltimore, Maryland, and should arrive not later than January 10th. Judging will begin at 10:00 A. M. on January 11th so it is necessary to have the potatoes at the hotel before that time.

Arrangements for the return of the exhibits must be made by the exhibitors, otherwise, the exhibits will be disposed of by the Maryland Vegetable Growers Association.

Group I - Adult Certified

Open to all potato growers in Maryland who have produced seed potatoes eligible for certification. Exhibits must be selected from potatoes grown in fields which have passed all certification requirements of the Maryland Seed Certification Board in two field inspections.

	Premiums
Class I. Irish Cobbler	1st. \$4.00; 2nd. \$3.00; 3rd. \$2.00; 4th. \$1.50; 5th. \$1.00; and 6th. \$1.00.
Class II. Smooth Rural (Mason, Rural New Yorker, Mill's Prize, Pioneer Smooth Rural, etc.)	1st. \$4.00; 2nd. \$3.00; 3rd. \$2.00; 4th. \$1.50; 5th. \$1.00; and 6th. \$1.00.
Class III. Russet Rural	1st. \$4.00; 2nd. \$3.00; 3rd. \$2.00; 4th. \$1.50; 5th. \$1.00; and 6th. \$1.00.
Class IV. Dakota Red	1st. \$4.00; 2nd. \$3.00; 3rd. \$2.00; 4th. \$1.50; 5th. \$1.00; and 6th. \$1.00.
Class V. Any Other Variety Variety must be designated.	1st. \$4.00; 2nd. \$3.00; 3rd. \$2.00; 4th. \$1.50; 5th. \$1.00; and 6th. \$1.00.

Group I - Adult Certified (Cont.)Premiums

Class VI.	Sweet Potatoes, Any Variety (Variety must be designated)	1st. \$4.00; 2nd. \$3.00; 3rd. \$2.00; 4th. \$1.50; 5th. \$1.00; and 6th. \$1.00.
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Group 2 - Adult Commercial

Open to all potato growers in Maryland.

Class VII.	Irish Cobbler	1st. \$4.00; 2nd. \$3.00; 3rd. \$2.00; 4th. \$1.50; 5th. \$1.00; and 6th. \$1.00.
Class VIII.	Smooth Rural	1st. \$4.00; 2nd. \$3.00; 3rd. \$2.00; 4th. \$1.50; 5th. \$1.00; and 6th. \$1.00.
Class IX.	Russet Rural	1st. \$4.00; 2nd. \$3.00; 3rd. \$2.00; 4th. \$1.50; 5th. \$1.00; and 6th. \$1.00.
Class X.	Dakota Red	1st. \$4.00; 2nd. \$3.00; 3rd. \$2.00; 4th. \$1.50; 5th. \$1.00; and 6th. \$1.00.
Class XI.	Any Other Variety (Variety must be designated)	1st. \$4.00; 2nd. \$3.00; 3rd. \$2.00; 4th. \$1.50; 5th. \$1.00; and 6th. \$1.00.
Class XII.	Sweet Potatoes, Maryland Golden Sweet	1st. \$4.00; 2nd. \$3.00; 3rd. \$2.00; 4th. \$1.50; 5th. \$1.00; and 6th. \$1.00.
Class XIII.	Sweet Potatoes, Any Other Variety (Variety must be designated)	1st. \$4.00; 2nd. \$3.00; 3rd. \$2.00; 4th. \$1.50; 5th. \$1.00; and 6th. \$1.00.

Group 3 - 4H Club Certified and Commercial

Open to all 4H Club members listed in the State Office who had potatoes for their project.

Class XIV.	Early Varieties (Irish Cobbler, Warba, Bliss Triumph, etc.) Variety must be designated.	1st. \$3.00; 2nd. \$2.00; 3rd. \$1.50; 4th. \$1.00; 5th. \$1.00; and 6th. Ribbon.
Class XV.	Medium Late Varieties (Green Mountain, Katahdin, Chippewa, etc.) Variety must be designated.	1st. \$3.00; 2nd. \$2.00; 3rd. \$1.50; 4th. \$1.00; 5th. \$1.00; and 6th. Ribbon.
Class XVI.	Late Varieties (Rural, Dakota Red, Up to Date, etc.) Variety must be designated.	1st. \$3.00; 2nd. \$2.00; 3rd. \$1.50; 4th. \$1.00; 5th. \$1.00; and 6th. Ribbon.

NEWS LETTER

Issued by
The Maryland Vegetable Growers' Association,
W. R. Ballard,
Secretary-Treasurer.

Vol. XVI. No. 2. College Park, Maryland. February, 1939.

The vegetable growers in Maryland will be interested in the announcement made by C. Z. Keller, Executive Officer for the Agricultural Adjustment Administration in Maryland, that the recommendations of the vegetable growers from the leading vegetable producing states have been followed by the Agricultural Adjustment Administration and have been included in the Agricultural Conservation Program for this year.

The vegetable growers asked that a vegetable allotment be established for commercial vegetable farms in counties that are determined to be in the commercial vegetable area. In Maryland all the counties have been included except Allegany, Garrett, St. Mary's, Charles and Calvert Counties.

A commercial vegetable allotment will be established by the County Committee with the assistance of other local committees for each farm in the commercial vegetable counties on which the average acreage of land planted to commercial vegetables in 1936 and 1937 was 3 acres or more. The sum of commercial vegetable allotments established for such farms in a county shall not exceed the sum of the average annual acreage of land planted to commercial vegetables on such farms in 1936 and 1937, except upon approval of the Administrator where it is found that the acreages grown in 1936 or 1937 were substantially reduced because of abnormal weather conditions.

The payment will be \$1.50 for each acre in the commercial vegetable allotment established for the farms of, if the acreage of land planted to commercial vegetables is less than 80% of the commercial vegetable allotment, payment will be computed on an acreage equal to 125% of the acreage of land planted to commercial vegetables unless the county committee finds that failure to plant 80% of such allotment was due to flood or drought.

In commercial vegetable counties a deduction will be made at the rate of \$20.00 for each acre of land planted to commercial vegetables on the farm in excess of the larger of the farm allotment of vegetables or 3 acres for farms not having a vegetable allotment in the commercial vegetable counties.

Under the 1939 Agricultural Conservation Program commercial vegetables means the acreage of vegetables and truck crops (including potatoes on a farm where no potato allotment is established, sweet potatoes, tomatoes, sweet corn, melons, cantaloupes, commercial bulbs and flowers, and strawberries, but excluding peas for canning and sweet corn for canning) of which the principal part of the production is sold to persons not living on the farm.

It is thought that this feature of the Agricultural Adjustment Program will be of some assistance in the stabilization of the vegetable acreage in the country and thereby prove to be an important factor in improving the low prices

for vegetables which have prevailed for the past few years.

In addition to the vegetable allotment and payment there will also be potato allotments in the early potato section of the State, namely Worcester and Somerset Counties.

The potato allotments for this year will be the same as in 1938. However, the rate of payment will be reduced from 5.4 cents a bushel to 3 cents times the normal yield times the allotted acreage. If the acreage planted to potatoes is less than 80% of the potato allotment, payment will be computed on an acreage equal to 125% of the acreage planted to potatoes unless the County Committee finds that failure to plant 80% of such allotment was due to flood or drought.

On a farm for which a potato allotment is established a deduction of 30 cents per bushel of the normal yield of potatoes for the farm will be made for each acre planted to potatoes in excess of the potato allotment.

In addition to the benefit payments to be made for compliance with the commercial vegetable and potato allotments, there are also wheat allotments on the commercial wheat farms in Maryland.

One of the important features of the program is the soil improvement phase in which a credit of \$1.50 a unit is given up to the soil building goal for the farm. The maximum payment which may be earned in connection with soil building practices is the sum of:

- (1) 70 cents for each acre of cropland in excess of the sum of the acreages used in computing payments for wheat and potatoes.
- (2) \$2.00 for each acre of commercial orchards on the farm January 1, 1939.
- (3) 25 cents for each acre of fenced non-crop open pasture land in excess of one-half of the number of acres of cropland, which is capable of maintaining, during the normal pasture season, at least one animal unit for each 5 acres.

The soil building practices will include the seeding of legumes and grasses, the plowing or discing under of green manure crops, and for the use of ground limestone, and also for application of superphosphate in connection with the seeding of perennial or biennial legumes, perennial grasses, winter legumes, lespedeza or permanent pasture except if the fertilizer is applied to these crops in connection with soil depleting crops.

The vegetable growers should consider the possibilities of improving their cropland by performing certain practices, and also the importance of keeping within the vegetable allotment established for the farm in order to avoid any deduction for excess acreage.

It is thought that, if the vegetable growers in the United States will give their wholehearted support to the Agricultural Conservation Program, and control their vegetable acreage, to reduce the acreage of vegetables in line with market demand, possibly there may be an improvement in vegetable prices this coming season.

NEWS LETTER

Issued by
Maryland Vegetable Growers' Association,
W. R. Ballard,
Secretary-Treasurer.

Vol. XVI. No. 3.

College Park, Maryland.

March, 1939.

Dr. Mahoney Addresses Meeting. At a meeting of the Baltimore County Farm Bureau Trucker's Local on Wednesday evening, March 15th, Dr. C. H. Mahoney of the University of Maryland, discussed some of the problems relating to the growing of spinach and other truck crops. (Before the meeting was called to order one of the members put on a demonstration to show how to ventilate a room by punching holes through the window!).

F. Ridgely Todd outlined the work being done by the Northeastern Vegetable and Potato Council and urged the desirability of typing up with this organization in order to accomplish needed improvements in the marketing of vegetables.

President R. T. Merritt reported upon the impression made by a committee which waited upon Governor O'Connor to urge improvement in marketing facilities in Baltimore City. It was thought that some action along this line might be forthcoming in the near future.

The Secretary of this Association discussed the changes made in the constitution at the January meeting which makes it possible for local vegetable growers organizations to affiliate with the State Association. Following this discussion the Baltimore County Farm Bureau Trucker's Local voted unanimously to apply for such an affiliation. This is the first local organization in the State to take such action.

Abstracts from Council Report. It was reported at the February meeting that the American Farm Bureau had set up a commodity committee for vegetable growers and has taken up the matter of improvement in crop reporting, market reporting, and the question of financing by private agencies.

A committee of the Northeastern Vegetable and Potato Council was appointed to study the needs of better and more coordinated information on market supplies and other conditions affecting the market.

The committee went into action at once and brought in the following resolutions which were unanimously adopted.

"Weather, Crop Conditions, Crop Movement and Economic Information.

Whereas, it is obvious that the fruit, vegetable and potato growers of this country do not have adequate crop estimate and market news facilities particularly in the nearby producing areas, and

Whereas, this situation places the growers in the northeast at a great disadvantage and makes it difficult if not impossible to market produce intelligently, resulting in wastes and inefficiencies, which

ultimately means a higher price to the consumer and severe losses to the farmers.

Therefore, be it resolved that this conference urge the Congress of the United States to appropriate immediately adequate funds for the Division of Crop Estimates and the Division of Fruits and Vegetables to assemble and disseminate the necessary timely information in cooperation with the proper state agencies.

Be it further resolved that a copy of these resolutions be sent by the Secretary to members of Congress from each state represented in this Council.***

Considerable discussion was had concerning the matter of clarifying the situation with distributors and getting ready to meet with distributor representatives to discuss the whole question of movements that might be made to the benefit of both producers and distributors.

It was mentioned that in contacting the chain stores and independent associations, they seem interested in merchandizing programs rather than surplus programs, so that surpluses as we understand them might be prevented.

Some of the other thoughts that were expressed included the fact that we should not hold our meeting with the distributors until we have definitely thought out the problems and decided what the growers are in a position to do and what they would like the stores to do.

A report was made on French's talk of the A & P in Bridgeport, Conn. where lack of grading and uniformity were stressed. It was stated that growers and distributors do not know what grades are most desirable, that we should do what we can with present conditions and find out what is actually best.

It was also expressed that this group might be a clearing house as to sources of supplies and certain educational procedure. The points to be considered in our program were stated as follows:-
(1) advance information on crops, (2) containers, (3) grades, (4) merchandizing methods, (5) general publicity.

In the general discussion around the program it was brought out that buyers do not always do what the head officers say will be done and that it might be advisable to confer with buyers. Chain stores, excepting when supplies are scarce, do not buy much from farmers' markets. It is difficult to get people to express themselves frankly when meeting with distributors. Uniformity and desirable package are more important possibly than the matter of grades.

The whole question of how much bearing down on price is carried on by the large buyers was discussed quite frankly and many times appearances are certain that bearing down is a policy, but it is next to impossible to prove.

The question of open price buying was discussed rather extensively from the important point of view that the prices may not be set or

determined by the right part of the crop. In other words, apparently more and more produce is bought direct and does not enter into the market. Yet the price paid for this produce is determined by the price in the market. As a rule all of this produce bought at open price is a better quality and uniformity, while the price on the open market is determined by supplies that are made up of both good and poor quality produce. It may result in a price for a larger part of the crop being set by the price of the smaller portion of the crop. Just where the price is set and what determines it is an important question and ought to be considered more fully in view of the development in methods of buying.

Altogether it was felt that the larger mass distribution buyers should feel or have a public responsibility to a greater extent than they may have now and that both sides of the picture, producers and distributors need information as a guide to policy.

Such a meeting between distributors and producers as proposed should be a discussion of these matters and result in better understanding. Larger organizations of growers are needed. It was mentioned that the strawberry auctions in Connecticut have standardized their packages and that chains are buying the better quality and paying more under those conditions.***

A report was made concerning progress in organizing the vegetable growers in other states. The middle west is getting ready for regional groups.

The canning industry is having difficulties with many canners in serious financial conditions. As the national convention of the canners they provided for the setting up of an economic and research department.

Altogether, considerable progress is being made in getting the vegetable industry of the nation into a more organized form. A motion was made and passed that the former resolution on increased attention being given to marketing by the various state agencies, be sent to the AFBF for their support and for their taking it up with the Land Grant College Association with the request that a policy be formulated to put it into effect.

New Lettuce Strains. Ross C. Thompson of the Federal Horticultural Field Station, has been developing strains of heading lettuce better adapted to warm regions such as are found in Maryland. One or two of these Columbia strains have been tested out in a few sections of the State with very good results. Arrangements are being made to enlarge these tests and to include a few new strains which seem to be even more promising than those already tried.

NEWS LETTER

Issued by
Maryland Vegetable Growers' Association,
W. R. Ballard,
Secretary-Treasurer.

Vol. XVI. No. 4.

College Park, Maryland.

April, 1939.

New Affiliation. The Board of Directors have agreed to affiliate with the Northeastern Vegetable and Potato Council. The dues are ten dollars per year. As soon as arrangements can be made the tie-up with this influential group will be effected. This connection should mean much to the vegetable industry in the State provided the Association through its representatives make the best use of the opportunity. It is quite important for any member who has any ideas as to what should be done about regulation of production, marketing, grading, packages, needed legislation, or any other matter pertaining to the betterment of conditions for the vegetable grower should speak up. We are attempting to develop an organization representative of the various groups in the State with machinery to facilitate discussion and action which may be deemed necessary. The Secretary will welcome comments from the membership at any time.

In order to keep the members informed of what is being done through the Council a digest of reports will be included in the News Letter from time to time as they become available.

Meeting March 11, 1939 at New York City. The Committee on Packages reported "that the fact that Iceberg lettuce is just coming into our summer trade as a factor in large heads with fertilizer practices, etc. still to be worked out, make it difficult to recommend a box for this product.

In South Jersey a $13\frac{1}{2} \times 18 \times 22\frac{1}{2}$ box for 24 heads was being used and this is the same being used in Wisconsin for beets and carrots.

The price of boxes becomes an obstacle when they reach 8 or 10 cents, although in some markets boxes are returnable. The general feeling was that a box constructed for shipment and one for local use should be developed.

It was felt that lettuce is coming back in the northeast and that a distinguishable package was needed.

The 50 pound bag for onions and the 24 quart crate for strawberries were approved. 100-pound burlap bag and 15 or 10-pound containers for potatoes, 12-quart climax, solid bottom veneer side type for ripe tomatoes for nearly sale and 30-pound lug for green wraps for distant market recommended.

No recommendation for early cabbage except that manufacturers should be asked to change dimensions of $1\frac{1}{2}$ bu. hamper to make it 6 inches lower with larger bottom reinforced to prevent breakage.

50-pound burlap sack popular for late cabbage. Round bushel basket or bushel hamper acceptable for peas and beans.

Mr. King, President of the New York State Farm Bureau, reported on movement to improve marketing conditions. The needs were outlined as follows: 1. better crop estimates; 2. enlarging market news service; 3. more information on truck movements; 4. more work on marketing grades; 5. additional money to the Farm Credit Administration for encouragement of cooperative efforts.

The best opportunity to secure funds for this program seemed to rest with the Appropriation Committee of the Senate, of which Senator George is Chairman.

The question as to when and in what manner the meeting of the Council with various representatives of distributors should be held and also what subjects should be discussed was referred to the State representatives.

New York felt that the chain stores should accept more responsibility as a public institution with corresponding methods of business. In the New York City area chains do not buy satisfactorily on the open market. The price as established, often is set by the price of inferior quality. Use of loss leaders was deplored. More local produce should be bought and chain stores should not be connected with commission business because they may not have a dependable supply. Growers should acquaint chain stores with knowledge of supplies. Buyers and inspectors should be better informed as to market and growing conditions.

Connecticut - Better public relations should be developed with chain stores. When local supplies are available, these should be bought and not be depressed by bringing in supplies from other sections.

Pennsylvania - Better quality products, pack and grade should be developed. Commission men should have better facilities for keeping vegetables in hot weather. Chain stores have definite place and service to render, but their pricing policy is often detrimental by ordering stuff and sometimes turning it down when it is delivered because they have over-bought or for some other reason. They do not pay prices at the top when goods are scarce. They should cooperate closer with growers and should have more advice and knowledge as to volume of products available.

Maryland - The chief problem is the quality and manner of packaging. In other respects Maryland agrees with the other States.

Virginia - There are various and devious methods of depressing prices and these should be done away with. Various distributing agencies should be coordinated by advice as to supplies and by better and more uniform packing. Inferior stuff should be kept home.

In general discussion it was brought out that there is a feeling that chain stores are not so sharp for quality as they make out to be and that vegetables carry other products in the cost of selling by many retailing groups.

Mention was made of the report by the President of the National Retailers' Association to the effect that lower margins and more business may be the answer. The way should be prepared ahead of marketing the supply by contact with distributors. Should include (1) information as to size and time of harvest, (2) better quality and uniformity and possibly more grading (3) some arrangement with distributors as to merchandising when the supply exists and it is a question whether to select certain commodities to work on or to include the

entire group. Radio and news publicity may be useful.

A clearing house for information needed. The A. & P. reducing number of stores, putting in more Super Markets.

Potato situation discussed as well as licensing and bonding trucker-dealers. Stated that trucks taking 5,000 cars more of potatoes each year from railroads. More control over more services between producer and consumer needed.

Spinach problem of Virginia and Maryland mentioned as a possibility of coordinating distributing agencies. Central office or regional man with states having one man each responsible for carrying out mechanics of program.

Before adjourning plans were made for a conference with cooperative chains and other retailers as well as for a committee to prepare for the meeting.

Meeting April 1, 1939 - New York City. Meeting in conference with the Council were representatives of 9 large northeastern city markets, 6 chain stores, National League of wholesale Fresh Fruit and Vegetable distributors, Washington, D. C. National Association of Food Chains, Washington Office and Cooperative Food Distributors of America. Three State Bureau of Markets, four State Colleges of Agriculture, U. S. Department of Agriculture and Federal Surplus Commodities Corporation were represented.

Industry faced with supply three times that of 1920 and marketing situation is desperate. Many problems grown out of truck transportation despite its cheaper cost. Improvement of marketing facilities needed in many large cities. Auction markets in New Jersey and regional markets in New York have helped but acreage has increased every year since 1920 except in two years.

Conditions vary in area of the Council -- New England being essentially a deficit area. Bulk of vegetable production in northeastern states for local consumption.

Council has felt that marketing can be improved by (1) better and more timely information, (2) better development of grades or uniformity, (3) more coordination of producers through the usual channels to retailers, (4) and by having usual channels use more sales efforts and closer relationships with the production end.

Some thought lower grades should be kept off market, but "Theoretically there is a market for all grades, according to the buying power of the consumer and his wishes, but when the commodities reach less than a certain amount per package, it does not pay the trade to handle them. Also there are all kinds of growers producing all kinds of packs and the best quality usually finds the ready market, however, grading and limiting supply this way helps prices."

One interesting point brought out was that although the produce on our farmers markets could be improved it was better than that on Pacific Coast markets despite the high quality of produce shipped to Eastern markets from the west.

Need for volume of produce, uniform quality or grades and buying power of the public are the real problems. Our present system of marketing is a dumping process by individuals when what is needed is some approach to maintaining the price structure, greater knowledge, and greater standardization. Great variation in package and uniformity creates adverse effect on market. The goal should be to

centralize movement or at least knowledge of movement and grade to maintain prices. Underselling by retailers creates a cycle of breaking prices which becomes reflected back through the channels of distribution and to the farmer.

It was felt that a certain amount of advertising might result in increased consumption without breaking prices. Suggested that profits from handling vegetables were made to carry expense of staples such as sugar handled on extremely low margins. Pennsylvania distributors have agreed not to advertise sugar.

Lower margins and lower prices may mean less and less to the farmer, however, as long as the bulk of consumers have low incomes, vegetables must be sold at low prices and it may be uneconomical to pack and grade too expensively.

Supply and demand still rule the price but knowledge of supplies and coordination of market supplies before prices are arrived at are essential and would help in stabilizing price conditions. A real opportunity here in the northeast where growers are close to distributors.

Little information is available as to proportion of different commodities as now produced fall into U. S. grade #1. With potatoes and apples this is between 60% and 65% of total production.

There was some discussion as to whether the buyers were agents of the consumers or the producers.

New Jersey's State Association of Auction Markets sends out by direct mail to 600 in the trade, the situation as to supplies received during preceeding week. Some advertising is done by this legislatively created body in cooperation with the New Jersey Council. Special contacts are made to assist in moving certain crops.

Wholesalers, chain stores and other distributing agents could do more of a selling job. Knowledge four or five days ahead is necessary for organizing drives.

Receivers could help by telling growers what is needed in the way of packing.

Full information on diet values of vegetables has not been developed as with other food products.

Conclusions of the conference involved (1) special developments for movement of 1939 crops, and (2) establishment of a long-time program for improvement in marketing perishables.

The furtherance of the objectives were placed in the hands of a committee representing the various groups, a program on the following points is to be prepared by the committee:

1. Improved market information.
2. Increased standardization.
3. More effective merchandizing.
4. Increased publicity and advertising of supplies.
5. Development of machinery to move surplus vegetables to other markets when practicable.
6. Support by FSCC purchases when necessary.

NEWS LETTER

Issued by
Maryland Vegetable Growers' Association,
W. R. Ballard,
Secretary-Treasurer.

Vol. XVI. No. 5.

College Park, Maryland.

May, 1939.

Soil Deficiencies. Up until recently it has been considered that soils were properly supplied with plant nutrients when lime, nitrogen, phosphoric acid, and potash were applied. Recent studies have shown, however, that some soils are deficient in some of the minor elements with consequent bad effects on certain crops. In certain areas canners complain of "black spot" in beets. This discoloration in the flesh is known to be induced by lack of boron in the soil.

Dr. J. C. Walker of Wisconsin has published an article on the control of this trouble through the use of 20-60 pounds of borax per acre, applied either drilled in the row or as a side-dressing. More recently Dr. Walker has suggested that it is probably better to use 40 pounds of borax per acre inasmuch as occasionally the 20 pound application does not entirely control the black spot.

In some of the trucking soils around Norfolk magnesium has been found to be lacking and decided responses have been secured from applications of dolomitic limestone especially on rapidly growing crops such as potatoes, cabbage, spinach, cucumbers, and corn. The addition of soluble magnesium to the fertilizer applications have also been beneficial.

It is quite likely that more attention will be given to the minor elements in the future, and fertilizers containing all the deficient elements will no doubt be more generally recommended.

Marketing Problems. At the Eastern Shore conference of the Extension Service, the marketing problems with vegetables were given as improper sales practices, low prices, and low quality. After discussion, the following solutions were proposed, (1) Sell only to buyers that will pay on delivery, (2) sell tomatoes on contract basis, (3) develop a timely market news service and (4) place on the market only quality products and retain low grade products on the farm.

Debunking Water Culture. California Circular 347 reports on comparison of crops grown in water culture and in soils. This interesting statement is quoted:

"A real test of the relative capacities of soil and water-culture media for crop production requires that the two types of culture be carried on side by side, with similar spacing of plants and with the same cultural treatment otherwise. The soil should be of suitable depth and have its nutrient supply power and physical condition as favorable for plant growth as possible. We initiated an experiment of this kind in Berkeley late last summer, with the tomato as the test plant. The experiment has now been carried on over a full year, and several of the conclusions derived from it warrant emphasis. The yield from the

soil-grown plants, however, was not markedly different from that of the plants grown by the tank method. When the greenhouse yields of tomatoes from either-*soil* or solution-grown plants were computed on an acre basis and compared with average yields of field-grown tomatoes, the greenhouse plants give far greater yields. But as already suggested, such comparisons have no direct practical significance because of the differences of climatic factors, cultural practice, and length of season in the greenhouse and in the open field.

There is no magic in the growth of plants in water culture. This is only another way of supplying water and essential mineral elements to the plant. Land plants have become adapted to growing in soils during their evolutionary history, and it is not reasonable to expect some extraordinary increase in their potentialities for growth when an artificial medium is substituted for soil. If no toxic conditions are present and a fully adequate supply of water, mineral salts, and oxygen is provided to the root system, either through an artificial nutrient solution or a soil, then in the absence of plant diseases and pests, the growth of a plant is limited by its inherited constitution and by climatic conditions.

In some of the preceding soils, however, the growth of plants has been found to be limited and decided responses have been secured from applications of certain mineral elements. The addition of soluble magnesium to the nutrient solution has been found to be beneficial in the case of certain plants, and the addition of soluble iron has been found to be beneficial in the case of certain plants.

It is quite likely that more attention will be given to the study of the mineral requirements of plants in the future, and that the results of such studies will no doubt be more generally recognized.

Marketing Problems. As the Garden Experiment Station of the University of California has been conducting experiments with various vegetables, the marketing problems which are involved in the production of these crops are being studied. The following are some of the problems which are being studied: (1) Soil and water quality, (2) Soil and water quantity, (3) Soil and water temperature, (4) Soil and water pH, (5) Soil and water salinity, (6) Soil and water nutrient content, (7) Soil and water oxygen content, (8) Soil and water carbon dioxide content, (9) Soil and water light intensity, (10) Soil and water humidity, (11) Soil and water air pressure, (12) Soil and water air composition, (13) Soil and water air temperature, (14) Soil and water air humidity, (15) Soil and water air pressure, (16) Soil and water air composition, (17) Soil and water air temperature, (18) Soil and water air humidity, (19) Soil and water air pressure, (20) Soil and water air composition, (21) Soil and water air temperature, (22) Soil and water air humidity, (23) Soil and water air pressure, (24) Soil and water air composition, (25) Soil and water air temperature, (26) Soil and water air humidity, (27) Soil and water air pressure, (28) Soil and water air composition, (29) Soil and water air temperature, (30) Soil and water air humidity, (31) Soil and water air pressure, (32) Soil and water air composition, (33) Soil and water air temperature, (34) Soil and water air humidity, (35) Soil and water air pressure, (36) Soil and water air composition, (37) Soil and water air temperature, (38) Soil and water air humidity, (39) Soil and water air pressure, (40) Soil and water air composition, (41) Soil and water air temperature, (42) Soil and water air humidity, (43) Soil and water air pressure, (44) Soil and water air composition, (45) Soil and water air temperature, (46) Soil and water air humidity, (47) Soil and water air pressure, (48) Soil and water air composition, (49) Soil and water air temperature, (50) Soil and water air humidity, (51) Soil and water air pressure, (52) Soil and water air composition, (53) Soil and water air temperature, (54) Soil and water air humidity, (55) Soil and water air pressure, (56) Soil and water air composition, (57) Soil and water air temperature, (58) Soil and water air humidity, (59) Soil and water air pressure, (60) Soil and water air composition, (61) Soil and water air temperature, (62) Soil and water air humidity, (63) Soil and water air pressure, (64) Soil and water air composition, (65) Soil and water air temperature, (66) Soil and water air humidity, (67) Soil and water air pressure, (68) Soil and water air composition, (69) Soil and water air temperature, (70) Soil and water air humidity, (71) Soil and water air pressure, (72) Soil and water air composition, (73) Soil and water air temperature, (74) Soil and water air humidity, (75) Soil and water air pressure, (76) Soil and water air composition, (77) Soil and water air temperature, (78) Soil and water air humidity, (79) Soil and water air pressure, (80) Soil and water air composition, (81) Soil and water air temperature, (82) Soil and water air humidity, (83) Soil and water air pressure, (84) Soil and water air composition, (85) Soil and water air temperature, (86) Soil and water air humidity, (87) Soil and water air pressure, (88) Soil and water air composition, (89) Soil and water air temperature, (90) Soil and water air humidity, (91) Soil and water air pressure, (92) Soil and water air composition, (93) Soil and water air temperature, (94) Soil and water air humidity, (95) Soil and water air pressure, (96) Soil and water air composition, (97) Soil and water air temperature, (98) Soil and water air humidity, (99) Soil and water air pressure, (100) Soil and water air composition.

Marketing Water Quality. The University of California has been conducting experiments with various vegetables, and the results of these experiments are being studied. The following are some of the problems which are being studied: (1) Soil and water quality, (2) Soil and water quantity, (3) Soil and water temperature, (4) Soil and water pH, (5) Soil and water salinity, (6) Soil and water nutrient content, (7) Soil and water oxygen content, (8) Soil and water carbon dioxide content, (9) Soil and water light intensity, (10) Soil and water humidity, (11) Soil and water air pressure, (12) Soil and water air composition, (13) Soil and water air temperature, (14) Soil and water air humidity, (15) Soil and water air pressure, (16) Soil and water air composition, (17) Soil and water air temperature, (18) Soil and water air humidity, (19) Soil and water air pressure, (20) Soil and water air composition, (21) Soil and water air temperature, (22) Soil and water air humidity, (23) Soil and water air pressure, (24) Soil and water air composition, (25) Soil and water air temperature, (26) Soil and water air humidity, (27) Soil and water air pressure, (28) Soil and water air composition, (29) Soil and water air temperature, (30) Soil and water air humidity, (31) Soil and water air pressure, (32) Soil and water air composition, (33) Soil and water air temperature, (34) Soil and water air humidity, (35) Soil and water air pressure, (36) Soil and water air composition, (37) Soil and water air temperature, (38) Soil and water air humidity, (39) Soil and water air pressure, (40) Soil and water air composition, (41) Soil and water air temperature, (42) Soil and water air humidity, (43) Soil and water air pressure, (44) Soil and water air composition, (45) Soil and water air temperature, (46) Soil and water air humidity, (47) Soil and water air pressure, (48) Soil and water air composition, (49) Soil and water air temperature, (50) Soil and water air humidity, (51) Soil and water air pressure, (52) Soil and water air composition, (53) Soil and water air temperature, (54) Soil and water air humidity, (55) Soil and water air pressure, (56) Soil and water air composition, (57) Soil and water air temperature, (58) Soil and water air humidity, (59) Soil and water air pressure, (60) Soil and water air composition, (61) Soil and water air temperature, (62) Soil and water air humidity, (63) Soil and water air pressure, (64) Soil and water air composition, (65) Soil and water air temperature, (66) Soil and water air humidity, (67) Soil and water air pressure, (68) Soil and water air composition, (69) Soil and water air temperature, (70) Soil and water air humidity, (71) Soil and water air pressure, (72) Soil and water air composition, (73) Soil and water air temperature, (74) Soil and water air humidity, (75) Soil and water air pressure, (76) Soil and water air composition, (77) Soil and water air temperature, (78) Soil and water air humidity, (79) Soil and water air pressure, (80) Soil and water air composition, (81) Soil and water air temperature, (82) Soil and water air humidity, (83) Soil and water air pressure, (84) Soil and water air composition, (85) Soil and water air temperature, (86) Soil and water air humidity, (87) Soil and water air pressure, (88) Soil and water air composition, (89) Soil and water air temperature, (90) Soil and water air humidity, (91) Soil and water air pressure, (92) Soil and water air composition, (93) Soil and water air temperature, (94) Soil and water air humidity, (95) Soil and water air pressure, (96) Soil and water air composition, (97) Soil and water air temperature, (98) Soil and water air humidity, (99) Soil and water air pressure, (100) Soil and water air composition.

A real test of the relative merits of soil and water-culture media for crop production requires that the two types of media be carried on side by side, with similar spacing of plants and with the same cultural treatment other than the medium. The soil should be of suitable depth and have its nutrient supply power and physical condition as favorable for plant growth as possible. We initiated an experiment of this kind in the University of California, with the tomato as the test plant. The experiment was carried on over a three-year period, and several of the conclusions reached from it warrant emphasis. The yield from the

NEWS LETTER

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Maryland Vegetable Grower's Association,
W. R. Ballard,
Secretary-Treasurer.

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College Park, Maryland.

June, 1937.

The Vegetable Exhibit. Because of the late date of the announcement that vegetables would be included in the exhibit last January, very few entries were made. This year the appropriation made available by the State Fair Board is less than previously allocated and this necessitates some adjustments in premium schedules. Certain items have been dropped out but the more important vegetables available at the time of the show have been retained.

The announcement is being made at this time so that exhibitors can plan ahead. It is hoped that growers will make some effort to stage a show of really high grade vegetables which will show that Maryland can produce quality material. The revised schedule follows:

Premium List

- Class I. Best 3 heads Cabbage - Flathead type - 1st, \$4.00; 2nd, \$3.00; 3rd, \$2.00; 4th, \$1.00; 5th, \$1.00.
- Class II. Best 3 heads Cabbage - Ballhead type - 1st, \$4.00; 2nd, \$3.00; 3rd, \$2.00; 4th, \$1.00; 5th, \$1.00.
- Class IV. Best 16 yellow Onions - 1st, \$4.00; 2nd, \$3.00; 3rd, \$2.00; 4th, \$1.00; 5th, \$1.00.
- Class VIII. Best 12 Carrots, any variety - 1st, \$4.00; 2nd, \$3.00; 3rd, \$2.00; 4th, \$1.00; 5th, \$1.00.
- Class X. Best 12 Parsnips - 1st, \$4.00; 2nd, \$3.00; 3rd, \$2.00; 4th, \$1.00; 5th, \$1.00.
- Class XI. Best 16 Turnips - 1st, \$4.00; 2nd, \$3.00; 3rd, \$2.00; 4th, \$1.00; 5th, \$1.00.
- Class XIII. Best 3 Hubbard Squash, any type - 1st, \$4.00; 2nd, \$3.00; 3rd, \$2.00; 4th, \$1.00; 5th, \$1.00.
- Class XV. Best 2 - 3 lb. baskets Mushrooms - 1st, \$4.00; 2nd, \$3.00; 3rd, \$2.00; 4th, \$1.00; 5th, \$1.00.

Cantaloupe Breeding and Strain Improvement*. The apparent trend in consumer demand for cantaloupes is for medium sized, round-oblong, well-netted fruit approximately five to five and one-half inches in diameter with thick deeply colored orange flesh and containing approximately twelve per cent total solids. With the

*C. H. Mahoney, Reprint from "TRANSACTIONS OF PENINSULA HORTICULTURAL SOCIETY".

exception of special local markets, large ribbed melons as well as green fleshed melons are no longer desired in the large cantaloupe buying markets. It seems advisable to keep this in mind since a large portion of the melons produced on the Eastern Shore of Maryland and in Delaware are shipped to the large markets of the North. With both of these trends in mind, the cantaloupe breeding program of the Maryland Experiment Station consists of first, the development of pure lines, by the process of inbreeding, of the more important commercial varieties of cantaloupes. At the present time, a number of inbred lines of the Honey Rock variety are included in the plant breeding cultures, five of which are in the eighth inbred generation. These are very uniform for certain specific characters. These lines are used in making crosses on pure lines of Hale's Best and Hearts of Gold. The Honey Rock variety has several characters which are very desirable in a commercial variety. The thick hard shell of this type is very desirable as it will withstand shipment and will not crack as badly as most varieties during wet weather. The total solids or sugar content of the flesh is also higher than most varieties and the flavor is distinctive. This type, however, does have rather thin flesh and many commercial stocks are segregating for shape and percentage of net.

One of the most promising types derived from the hybridization work is a cross between Honey Rock and Hale's Best which has been backcrossed on Honey Rock. This cross is now in the fifth generation from the backcross and No. 394032, which was the best progeny in 1938, produces fruits which very closely resemble Honey Rock in size, shape, type of shell, and netting. This hybrid was as early as the green fleshed Anne Arundel and was quite uniform for thick deep orange flesh and the quality was excellent. The hybrid has the thick flesh of the Hale's Best and a blend of flavor of the two types. Additional progenies of this same type were again backcrossed to Honey Rock but the resultant progenies in 1938 distinctly showed no further advantage of backcrossing on Honey Rock. Another year or two of work will be required to determine the commercial suitability of this new type.

The Hale's Best variety or some of its strains is grown rather extensively on the Eastern Shore of Maryland. This type, however, was developed for the hot, dry sections of the Imperial Valley of California. Under these conditions, this type develops fruit of excellent quality and high sugar content. When this type is grown under eastern conditions with a much higher humidity, heavier rainfall, and under conditions where leaf diseases often defoliate the plants, the quality of the melons will not compare with those grown in California. Consequently an effort is being made at the Maryland Station to develop a Hale's Best type for eastern conditions, which will compare favorably with those shipped in from the west. The same cross was made, as mentioned above, i. e., Honey Rock, crossed on Hales. Backcrossing was then practiced on Hale's Best in order to select the latter type. Some of the resultant progenies are showing distinct promise with respect to type, yield, and quality. The one disadvantage of this backcross progeny is the loss of fruit size. It is hoped, however, that by further selection a large-fruited eastern Hales type will be isolated.

The extensive distribution of Fusarium Wilt in Anne Arundel county and on the eastern shore has necessitated the inclusion of a wilt resistant breeding project as part of the cantaloupe work. This project was begun in 1938. An effort will be made to develop resistant types of the various crosses which show commercial promise. It may be necessary to introduce some of the newer types before resistant strains are obtained but it is the aim of this station to develop Fusarium resistant types as rapidly as possible.

NEWS LETTER

Issued by
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July, 1939.

Injury to Seed Affects Germination of Lima Beans. It has long been known that broken or split lima beans used for seed greatly affects the stand obtained with this crop. Recent investigations show that beans may be injured internally and since the damage is not visible to the eye, growers do not appreciate how great a source of injury this may entail.

California produces much of the seed stock used in the eastern states and they have been investigating the problem. Much of the injury arises from the threshing operations. The percent of damage may vary considerably due to variations in the moisture content of the beans. Tests show that speed of the revolving cylinder influences greatly the extent of injury. Visible damage to beans ranged from a fraction of one percent at the lowest speed to 25 percent at the highest speed. Internal damage at the lowest speed amounted to 7 percent and this increased to 37 percent at the highest speed. These figures are calculated after the visibly injured beans have been removed. Investigations are seeking improvements in threshing operations.

It has been found that other handling operations may be responsible for considerable damage.

Fast moving cup-type elevators and steep slides found in bean warehouses are the most likely points where damage to seed beans during handling may occur. Beans of 10.6 percent moisture content rolled down a 45° slide, showed total damage of approximately 4.5, 8.6, and 15.3 per cent respectively for slide distances of 6.4, 10.5, and 15.0 feet. Comparative tests showed that neither the plate nor the pick-up type of planter produces any appreciable amount of damage.

Plants resulting from damaged seed are classified as "bald-head" in which true leaves are missing; the "snake-head" in which the two cotyledons have been detached. Such seedlings seldom produce a crop of any importance.

Other forms of injury occur in which the root and sometimes the lower part of the stem are missing. Scars on the stems occur. Such injuries greatly delay the development of the plants, as well as making them more susceptible to the attacks of disease.

If members are interested in further details, they should write to the Agricultural Experiment Station at Berkeley, California for Bulletin No. 580.

"Do Squashes and Pumpkins Cross?" Do pumpkins and squashes mix? asks the gardener. The literature on the subject is confusing owing to the fact that the terms 'pumpkin' and 'squash' have not been heretofore clearly defined and consequently have been used more or less interchangeably. The King of the Mammoth group, for example, is listed by some seedsmen as a squash and by others

as a pumpkin. In the past, effort has been made to distinguish between these two groups on the basis of either place grown or the use of the product. Sturtevant suggests that the varieties grown in the garden are squashes and those in the field are pumpkins. Other authorities have defined the squashes as the sorts used for human food and the pumpkins as the stock food. Obviously neither of these definitions will hold and the only consistent basis for classification is one based upon taxonomic characters.

A classification of pumpkins and squash based upon their botanical relationship is proposed by Castetter and Erwin, who classify the *C. pepo* and *C. moschata* as pumpkins and the *C. maxima* as a squash. In this classification emphasis is placed upon the character of the fruit stalk, the pumpkin having a hardy woody stem which is ridged and furrowed, whereas the true squashes have a swollen stem which is cylindrical rather than ridged and furrowed and inclined to be soft and spongy and yield to the thumb nail. In this publication the classification by Castetter and Erwin is followed through.

From the data presented in the foregoing discussion, it is obvious that in answering this question it must be kept clearly in mind as to what is a squash and what is a pumpkin, and second, which varieties belong to the two species of pumpkins and which ones to *C. maxima*, the true squashes. Since fertile crosses are limited to the varieties belonging to the same species, the answer to the growers' questions as to which varieties will mix is to be found in the species relationship. Herewith is presented a list of the commercial varieties and synonyms of cucurbits under the respective species to which they belong.

PUMPKINS

C. pepo

Cocozelle, Connecticut Field, Delicata, Early White Bush, Scallop, Early Yellow Bush Scallop, Fordhook, Fordhook Bush, Fort Berthold, Golden Custard, Golden Oblong, Long Island White Bush Scallop, Long White Marrow, Mammoth Tours, Mammoth White Bush Scallop, Mandan, Omaha, Panama, Perfect Gem, Pie Pumpkin, Sandwich Island, Strickler, Sugar Pumpkin, Table Queen, Vining Cocozelle, White Summer Crookneck, White Vining Vegetable Marrow, Winter Nut, Yellow or Golden Summer Crookneck, Zucchini.

PUMPKINS

C. moschata

Calhoun, Chirimen, French Cocanut, Japanese Pie, Large Cheese, Mammoth Golden Cushaw, Striped Cushaw, Tennessee Sweet Potato, White Cushaw, Quaker Pie, Small Golden Cushaw.

SQUASHES

C. maxima

Alligator, American Turban, Arikara, Atlas, Autumnal Marrow, Banana, Bay State, Delicious, Delicious—Golden, Essex Hybrid, Estampes, Faxon's Brazilian, Genuine Mammoth, Gilmore, Hubbard—Blue, Hubbard—Chicago Warty, Hubbard—Golden, Hubbard—Green, Hubbard—Kitchenette, Ironclad, Mammoth Chili, Mammoth Whale, Marblehead, Plymouth Rock, Prolific Marrow, Sibley, Victor, Warren, Winnebago.

The grower may therefore find the answer to his question by referring to the species classification of the particular variety in mind. In general, it may be said that a given variety will cross with any other

variety within the same species. On the other hand, the studies in the crossing of cucurbits made at this station clearly indicate that the true squashes, *C. maxima*, produce sterile hybrids when crossed with either species of pumpkin. The practical answer to the gardener's question, Do pumpkins and squash mix?, is, No, they do not, assuming that all varieties of *C. maxima* are classed as squashes and varieties of *C. Pepo* and *C. moschata* as pumpkins. Crosses between *C. pepo* and *C. moschata* are theoretically possible but apparently do not occur in nature.

(From Iowa Bulletin No. 263, Species and Varietal Crosses in Cucurbits).

NEWS LETTER

Issued by
Maryland Vegetable Grower's Association
W. R. Ballard,
Secretary-Treasurer.

Vol. XVI. No. 8.

College Park, Maryland.

August, 1939.

Potato Growers Advised to Spray for Control of Late Blight. Late blight has already made its appearance in most potato fields in the western part of Maryland, according to Dr. R. A. Jehle, Specialist in Plant Pathology for the University of Maryland. The disease has severely injured many fields which have not been thoroughly sprayed or dusted with material which will control the disease. Recent rains have been very favorable for the development of late blight and all potato fields should be sprayed or dusted as frequently as possible as long as damp rainy weather continues. If the weather becomes dry spraying or dusting at one to two week intervals will be sufficient. Frequency of the applications should be gauged by the growth of the plants and presence of insects and diseases.

Best results have been obtained from spraying with instant Bordeaux which can be made in the following manner: Fill the sprayer one-half full of water. Place the pulverised bluestone on the screen and wash it into the tank, and keep thoroughly agitated throughout the entire mixing process. Add water until the tank is about three-fourths full; then place the hydrated lime on the screen and wash it into the tank and continue agitation of the mixture until thoroughly mixed. Fill the tank with water and use the spray immediately.

Spraying has given better results in late blight control in Maryland than dusting and dusting is recommended only in fields where conditions make spraying difficult or impossible. If dusting is substituted for spraying, use a dust containing approximately 20% monohydrated copper sulphate, 20% calcium arsenate, and 60% hydrated lime.

The University of Maryland, in cooperation with the United States Department of Agriculture has developed several new varieties have yielded just as well or better than the Rural varieties in experiments conducted in Garrett County. Although they are resistant to late blight, it will be necessary to spray or dust them for the control of insects and other diseases. However, the number of applications made during the season can be materially reduced, especially in seasons which are favorable for late blight development. --Dr. R. A. Jehle.

Vegetable Juices. One of the remarkable developments in the vegetable industry in recent years is that of the tomato juice manufacture. This seems to have caught the popular fancy and competes quite strongly with various fruit juices.

Some dieticians strongly urge the increased use of juices of other vegetables besides tomatoes. Mineral salts as well as the vitamin content give these juices important values in the diet and it is claimed that their wider use would tend generally to improvements in health conditions.

In the digestion of meats and cereals certain end products are acid in reaction. It appears that these products are most readily eliminated from the body as salts rather than as acids. For this reason alkaline forming foods in the diet are recommended in sufficient excess to form salts in combination with the acids

from other foods.

Most fruits (cranberries is an exception) and practically all vegetables leave alkaline end products in the process of digestion. This is one reason for their importance in the diet.

Unless vegetables are properly cooked and handled much of their value is lost either through too high temperatures or are thrown away in the juices extracted in the cooking.

There are undoubtedly problems still to be worked out in the practical extraction and preservation of vegetable juices, but it is believed that a market awaits the product when successfully developed. In the marketing of juices of vegetables, considerable savings might be made in the reduction of bulk and in the greater use of unmarketable material.

Dry Weather. Lack of moisture in some sections of the State has seriously curtailed production of several of the important vegetable crops. Dry conditions in New York and the New England States have been even more severe. However curtailment of yields has not been greatly compensated for by increased returns. This has been due to nearly normal production in competing sections.

Best results have been obtained from spraying with instant Bordeaux which can be made in the following manner: Fill the sprayer one-half full of water. Place the pulverized limestone on the screen and wash it into the tank, and then thoroughly agitate throughout the entire mixing process. Add water until the tank is about three-fourths full; then place the hydrated lime on the screen and wash it into the tank and continue agitation of the mixture until thoroughly mixed. Fill the tank with water and use the spray immediately.

Spraying has given better results in late blight control in Maryland than dusting and dusting is recommended only in fields where conditions make spraying difficult or impossible. It dusting is substituted for spraying, use a dust containing approximately 80% monohydrated copper sulphate, 20% calcium arsenate, and 60% hydrated lime.

The University of Maryland, in cooperation with the United States Department of Agriculture has developed several new varieties of Maryland Potatoes well or better than the Rural varieties in experiments conducted in Garrett County. Although they are resistant to late blight, it will be necessary to spray or dust them for the control of insects and other diseases. However, the number of applications made during the season can be materially reduced, especially in seasons which are favorable for late blight development. -J. H. Jones.

Vegetable Juices. One of the remarkable developments in the vegetable industry in recent years is that of the bottled juice manufacturers. This seems to have caught the popular fancy and compares quite favorably with various fruit juices.

Some distillates strongly urge the increased use of juices of other vegetables besides tomatoes. Mineral salts as well as the vitamin content give these juices important values in the diet and it is claimed that their wider use would tend generally to improvement in health conditions.

In the digestion of meats and cereals certain end products are well tolerated. It appears that these products are most readily eliminated from the system as acids rather than as alkalies. For this reason alkaline forming foods in the diet are recommended in sufficient excess to form acids in combination with the acids.

NEWS LETTER

Issued by
Maryland Vegetable Growers' Association
W. R. Ballard,
Secretary-Treasurer.

Vol. XV. No. 9. College Park, Maryland. September, 1939.

Saving Tomato Seed. There may not be many growers who save their own tomato seed and beginners may be at a loss to know how to separate the seed from the pulp. It can be done, however, very simply leaving nice clean seed for planting.

The selected tomatoes should be cut open and the pulp containing the seeds squeezed out into a container. A small quantity of water should be added and the container should then be left in a warm place for a few days until fermentation has started. The mass should be stirred occasionally. Gradually the seeds will settle to the bottom while the fermenting pulp will float on the surface. After the seed has separated the pulp can be floated off. After two or three washings in fresh water, the clean seed can be put out on racks to dry. When thoroughly dried, the seed should be bagged and carefully stored in containers which will protect it from mice, since this rodent is very fond of tomato seed.

Notes on Condition of Canning Crops - 1939. The condition of most of the canning crops throughout Maryland this year has been quite spotty, dependent largely upon local weather conditions. The indicated yields per acre of several of the major crops are lower than for 1938 and, coupled with reduced acreages, the total production will undoubtedly be considerably below that of a year ago.

Snap bean yields are indicated at 1.2 tons per acre as compared with 1.7 tons in 1938. In some sections the crop had practically no rainfall during the entire growing and picking seasons and the yields were, of course, disappointing. In some local sections, particularly in Western Maryland, the season was much more favorable and yields were normal or above.

Due both to aphid infestation and hot, dry weather just prior to the harvesting season, this was one of the worst years for peas since the drought year of 1930. The conditions were more severe on the Eastern Shore, with some sections in Western Maryland having nearly normal yields.

The average yield of sweet corn is indicated at 24% below that of last year, but still slightly higher than the past ten-year average. Hot, dry weather just before pollination, however, left many ears poorly filled and the cut-off was far below average.

The prospect of a normal tomato crop is at this time only fair. The early tomatoes did not set as heavily as usual and the late crop still has not been completed. The late southern plants developed severe collar rot and many fields were disked and replanted with home-grown plants. Most home-grown plants were about two weeks late. The early season was dry, and the heavy rains over a good part of the State in recent weeks have resulted in rapid development of leaf blights. With favorable weather from now on and a late fall, the yield might still be normal.

Lima beans are good, bad, and indifferent, depending largely upon the presence of sufficient moisture. Some sections are getting a ton or more to the acre, while other sections are getting from 600 to 800 pounds.

Downy Mildew of Spinach. Downy mildew has been found on spinach in twenty-four states where it causes losses of from three to fifteen per cent of the crop, according to Bulletin 718 of Cornell University. All varieties of spinach seem to be equally susceptible. Symptoms of the disease are yellowing, stunting, and necrosis of the infected areas.

Of the four possible sources of primary inoculum (infected seeds, infested seeds, infested soil, and infected plants which overwinter), the last-named source only was found important on Long Island. Wind and rain are the important inoculating agents.

With favorable temperatures, infection may take place in less than three hours after the plants are inoculated. Fruiting of the fungus will not occur in less than six days after inoculation at temperatures of 60° to 70° F. High relative humidities (85 per cent or above) are necessary for fruiting of the fungus.

Control of the disease by isolation of the overwintered spinach plants from the winter-and spring-sown crops is suggested for Long Island farmers. The use of copper fungicides as protectants and the selection of spinach varieties for resistance to mildew proved unsuccessful.

Food Preservation. Housewives might be interested in Extension Service Leaflet 142 from the Massachusetts State College, Amherst on Food Preservation. It gives directions for canning fruits, vegetables, meats, and soup stock as well as for making jams and jellies.

Another publication of interest in this connection is Bulletin 373 from the Agricultural Experiment Station, Bozeman, Montana. It is entitled "The Vitamin Content of Green String Beans when Cooked or Canned and Stored." Green string beans contain only a moderate amount of protein, carbohydrate and fat, but are especially rich in calcium and are a valuable source of iron. The composition of canned string beans compares closely with canned tomatoes, asparagus, carrots and beets, as far as their protein, fat and carbohydrate are concerned. Since, however, little was known about the vitamin content, studies were undertaken to determine the vitamin value of beans when freshly cooked and when canned and kept in storage for varying lengths of time.

Nutrition workers at the present time estimate that the human adult needs daily:

1. From 3,000 to 6,000 International units of vitamin A, to keep mucous linings and the eyes in a healthy condition.
2. From 300 to 600 International units of vitamin B1, to insure normal functioning of the gastro-intestinal tract and nerves.
3. From 28 to 100 milligrams of ascorbic acid (Vitamin C) to keep body tissues in a healthy condition.

Green string beans were tested for their content of these three vitamins.

The data presented indicate that cooked green beans yield more units of vitamin A than raw green beans. This is due doubtless to the fact that they are more digestible. After six months of storage, the home-canned beans appeared to be nearly as rich in vitamin A as the freshly cooked beans. Green string beans may, therefore, be considered a good source of vitamin A.

The results of tests show that cooking for 45 minutes causes no loss in the vitamin B1 potency of green string beans, but canned string beans stored for six months seem to have lost about 40 per cent of their vitamin B1 content by the time they have been reheated. Freshly cooked green string beans

are considered a good source of vitamin B1, being comparable to egg and canned peas, and better than potatoes.

Vitamin C, commonly called ascorbic acid, seems to be as high in canned beans after two weeks storage as in the fresh beans. After two months in storage, however, there was a notable decrease in ascorbic acid. Beans in glass jars continued to lose their ascorbic acid content until at the end of seven months only 0.04 milligrams per gram were found. Those in tin containers did not appear to lose much after three months storage.

Wilt Resistant Watermelons. Watermelon wilt is prevalent in the main producing sections of Maryland. Since the development of resistant strains seems to be the most promising method of control, interest is being shown in the attempts to develop such types. The problem seems to be to combine resistant characters with other qualities essential in a commercial type. Several resistant varieties are being tested in Maryland and in 1938 the most outstanding variety was Hawkesbury, which gave a yield of 364 melons per acre, with an average weight of 16.7 pounds.

NEWS LETTER

Issued by
Maryland Vegetable Growers' Association
W. R. Ballard,
Secretary-Treasurer.

Vol. XVI. No. 10. College Park, Maryland. October, 1939.

What Kind of Meetings? Arrangements will soon have to be made for the annual meetings of the Association to be held in Baltimore next January. In order to have a program which is interesting and timely, it is desirable that the members should suggest topics they would like to hear discussed as well as speakers they would like to hear. The Secretary has always felt that it was desirable for more of the growers to appear on the programs, but it has been almost impossible to induce them to agree to have their names placed on the program. Information as to growers who can contribute something of interest would be gratefully received. Experiences in growing specific crops or general observations regarding the vegetable industry, such as changes in methods, labor problems, marketing etc., could no doubt be discussed with profit. Perhaps growers would feel freer to engage in the discussions if a symposium were held with a good leader to guide the discussion. Let us have your ideas along this line.

As for as possible meetings in various parts of the State will be planned so that specific problems in the various producing areas can be considered. A small start along this line was instituted last year and it is hoped that the growers felt that the meetings were worthwhile.

It is planned to continue the potato and vegetable exhibit in connection with the annual meeting in Baltimore. The potato schedule will remain the same as last year but some changes have been made in the vegetable list — some types having been eliminated and mushrooms being added. The vegetable list was outlined in the June news letter but this will be a reminder that an exhibit of quality vegetables is desired and growers should make plans to enter in as many classes as possible.

New Varieties and Strains. Both seedsmen and government workers have extensive projects under way looking toward the improvement of varieties and strains of vegetables. Scientific methods of breeding plants have advanced to the point where more direct attacks can be made on the problems of improvement than could have been possible a few years ago. Sweet peppers are an example of rapid progress in the development of a particular type, and recent information indicates that another great advance step is in the offering.

The U. S. Department of Agriculture in cooperation with states in producing areas have tackled the problem of developing more adaptable potato varieties with especial relation to disease resistance, production, and market qualities. Several new varieties have already been named and others are on the way. A new one which has considerable promise for Maryland growers has been named Sequoia. This variety originated in North Carolina. A sample will probably be an exhibit at the annual meetings. It is hoped that more detailed information can be had in the near future relating to its qualities and performance under Maryland conditions.

Hybrid corns are coming to the front because of their high yield and uniformity of product.

Considerable attention is being given to disease resistance in a number of groups. Less promise has appeared in types resistant to insects but some cases are well known. One home gardener this fall reported that the yard-long bean seemed to be unharmed by the Mexican bean beetle while the Kentucky wonder growing nearby was badly attacked.

The Maryland Golden Sweet Potato is a good example of what can be done with certain vegetables in simple selection. Much more involved methods are essential to progress with many other vegetables and trained workers are needed for this purpose. Particularly difficult is the development of strains resistant to virus diseases. This is due partly to the large number of viruses but also the difficulty of recognizing them in their initial stages. Identification is made largely by effects on the plants rather than by microscopic examination as may be done with fungi and bacteria.

War Interferes With Imports. It is understood that spice companies have formed a new corporation to grow Paprika in Georgia and Louisiana. Normally the supply is produced in Hungary and what was formerly Czechoslovakia at such a low price that American farmers could not compete successfully. War conditions apparently are destined to raise the price to the point where it will pay to grow it in this country. While paprika can be grown in Maryland it is probable that yields would not be high enough to make its production profitable. A long growing season is needed to insure a satisfactory yield.

New Lima Bean Varieties Developed for Canning purposes. Three new lima bean varieties, Illinois Baby Potato, Baby Fordhook, and Maryland Thick Seeded, which have been developed recently, bid fair to be an improvement over the commonly used Henderson Bush variety, according to Herman A. Hunter, specialist in canning crops for the University of Maryland Extension Service. The Maryland Thick Seeded variety was developed at the University of Maryland and has the largest percent of small-size beans of the three varieties. All of the varieties are suitable for canning and may be suitable for freezing.

Illinois Baby Potato was developed at the Illinois Agricultural Experiment Station. It has small, thick beans of excellent quality. It is a week to twelve days later than Henderson in maturing which may be a little too late for use after peas in some seasons. Commercial quantities are now available for trial purposes.

Baby Fordhook was selected at the Ohio Agricultural Experiment Station and developed further by the U.S. Department of Agriculture. It is a small-podded, small, thick seeded variety similar to Illinois Baby Potato, but slightly smaller in plant, pod and bean. It is about four days later than Henderson. Seed will not be available for commercial planting this year.

The Maryland Thick Seeded variety differs from the Baby Fordhook in having slightly smaller plants, narrower pods and beans and in maturing a few days earlier. The beans are plump but so small that special screens are necessary in vining. Seed is not yet available for commercial planting.

In tests conducted in this state in 1937, Illinois Baby Potato and Baby Fordhook yielded approximately the same or more than Henderson Bush. Maryland Thick Seeded yielded somewhat lower. Last year, in trials which included only two of these new varieties, Illinois Baby Potato and Maryland Thick Seeded, both of these varieties yielded considerably better than Henderson Bush, due largely to a heavier set of pods. In canning and freezing tests, all three of these new varieties were judged of better quality and appearance than Henderson.

NEWS LETTER

Issued
by

Maryland Vegetable Growers' Association

W. R. Ballard,
Secretary-Treasurer.

Vol. XVI. No. 11.

College Park, Maryland.

November, 1939

Affiliated Groups. Members are reminded that a recent amendment to the constitution provides for the affiliation of local groups. A minimum of ten persons in a local can secure representation by paying only 50 cents per year per person (just half the regular dues) and will be entitled to the monthly news letter and the annual report. This is an opportunity which the Secretary hopes will be taken by more local groups. If some member will take the initiative, it should not be difficult to get nine others to join in this undertaking. In accord with the plan of organization these local groups should take the lead in arranging for educational meetings to discuss local problems. The Secretary will be glad to cooperate in such undertakings by helping to secure speakers, illustrative material, demonstrations, etc. A new year will soon be upon us and the logical time to organize local groups is now so that members can get the full annual benefit of their dues. It will be appreciated if County Agents in vegetable producing areas will assist in the perfecting of this organization.

Unusual Crossing. The University of Minnesota has been experimenting in the hybridizing cabbage with Brussels Sprouts. It is hoped that this work may result in forms of cabbage with improved eating and marketing qualities as well as Brussels sprouts adapted to wider growing conditions than are now possible. It is thought that there are unusual possibilities in hybridizing the various members of the cabbage family, resulting perhaps in valuable new forms and wider adaptations. Our growers would welcome a type of cauliflower for example which would more consistently head in the warmer regions.

New Projects with Sweet Potatoes. The U. S. Department of Agriculture has been studying sweet potatoes introduced from other countries with rather promising results. Some types especially seem to be entirely resistant to stem rot. Through hybridization it may be possible to combine this character with those of standard commercial sorts.

Another interesting development is the discovery that the starch of sweet potatoes is especially suitable for sizing textiles. Some of the new varieties are high in recoverable starch and the Bureau of Chemistry and Soils has perfected methods for its extraction. The making of dextrin from sweet potatoes for uses as an adhesive has also developed from this work.

These developments together with those with other crops may be very important in the future of agriculture. The production of crops for food purposes alone has distinct limitations. If this can be supplemented by furnishing raw materials used in the industries, it will provide a broader base for agricultural prosperity.

Spacing Distance for Sweet Potatoes. H. H. Zimmerley of the Virginia Truck Experiment Station reports on a test carried on at Norfolk and at Onley in which plants were spaced at 12, 16, 20 and 24 inches at Onley and

10, 14, 18, and 22 inches at Norfolk, these spacings conforming to the usual practices of commercial growers in the two sections. One thousand pounds per acre of a 3-3-15 fertilizer was applied after the plants were set. In every instance, increasing the space between plants resulted in an increase in the average weight of each root and, with one exception, in an increase in the number of roots. The number of primes to the plant increased with an increase in spacing from 10 inches to 14 inches and 14 inches to 18 inches. Increasing the planting distance from 20 inches to 24 inches did not result in a significant difference.

The increased yield for each hill, however, did not compensate for the increased area allotted each plant. The calculated yield on the acreage basis shows that the closest spacings gave the highest yield of marketable sweet potatoes and also the highest total yields. The varieties used were Little Stem Jersey and Porto Rico. With the latter variety there were no significant differences between the 10 and 14 inch spacings.

The closer spacing requires more plants and Zimmerley's conclusion considering all factors in this one test that the optimum spacing for Porto Rico was 14 inches and for Little Stem Jersey 20 inches.

Sequoia Potato. This new variety appears to be quite resistant to blight and mosaic and strangely is less attacked by insects than most other varieties. In season it may be too late to displace Irish Cobbler in the warmer sections. However it should be thoroughly tested under Maryland conditions. In Garrett County it yielded 397 bushels per acre of U. S. No. 1 while Rural Russet gave only 291 bushels.

In a five-year test in Ashe County, North Carolina the Sequoia averaged 347.6, Cobbler 224.2, Katahdin 218.4, Chippewa 262.8. Whether or not it will have a place in the State as a commercial variety remains to be seen, yet it has qualities which would seem to make it a valuable new sort for the home garden.

Various members of the cabbage family, including Brussels sprouts, cauliflower, and other vegetables, are also being tested for resistance to blight and mosaic.

New Potatoes with Sweet Potatoes. The U. S. Department of Agriculture has been studying sweet potatoes introduced from other countries with a view to determining their value for the home garden. Some types especially seem to be admirably resistant to blight and mosaic. Through hybridization it may be possible to combine this resistance with those of standard commercial sorts.

Another interesting development is the discovery that the starch content of sweet potatoes is especially suitable for making textiles. Some of the varieties are high in resistant starch and the Bureau of Chemistry and Soil Conservation is studying them for their value in the manufacture of rayon.

These developments, so far, are only a few of the many ways in which sweet potatoes are being studied. The production of sweet potatoes is very important in the South. The production of sweet potatoes in the United States is about 100,000 tons. It is the only vegetable crop which is produced in all of the Southern States. It is also one of the most important crops in the Southern States. It is a very important crop in the Southern States. It is a very important crop in the Southern States.

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NEWS LETTER

Issued by
Maryland Vegetable Growers' Association,
W. R. Ballard,
Secretary-Treasurer.

Vol. XVI. No. 12.

College Park, Maryland.

December, 1939.

Program for Annual Meetings

Wednesday, January 10, 1940.

Lord Baltimore Hotel,
Baltimore, Maryland.

Morning

10:00 Call to Order ----- President Egbert Hawkins.

Appointment of Committees.

10:05 Progress in Vegetable Research ----- Dr. C. H. Mahoney,
Professor of Olericulture.

10:50 Production Problems ----- Discussion led by:
H. M. Carroll, County Agent,
Bel Air, Maryland.

Experiences with New Varieties.
Fertilizer Placement.
Insect Pests.
Disease Control.
Labor Difficulties.
Grading and Packing Needs.

Recess

Afternoon

1:30 Baltimore Produce Market Terminal
to Date ----- Discussion led by:
Stanley E. Day, County Agent,
Annapolis, Maryland.

Need for Publicity.
Groups Opposed.
Where Do We Go from Here?

Report of Committees.

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W. R. Ballard,
Secretary-Treasurer.

Vol. XVI. No. 12. College Park, Maryland. December, 1939.

Program for Annual Meetings

Wednesday, January 10, 1940.

Lord Baltimore Hotel,
Baltimore, Maryland.

Morning

- 10:00 Call to Order - - - - - President Egbert Hawkins.
Appointment of Committees.
- 10:05 Progress in Vegetable Research - - - - - Dr. C. H. Mahoney,
Professor of Olericulture.
- 10:50 Production Problems - - - - - Discussion led by:
H. M. Carroll, County Agent,
Bel Air, Maryland.

Experiences with New Varieties.
Fertilizer Placement.
Insect Pests.
Disease Control.
Labor Difficulties.
Grading and Packing Needs.

Recess

Afternoon

- 1:30 Baltimore Produce Market Terminal
to Date - - - - - Discussion led by:
Stanley E. Day, County Agent,
Annapolis, Maryland.
- Need for Publicity.
Groups Opposed.
Where Do We Go from Here?
- Report of Committees.

3:30 Do We Need a Vegetable Seed Law? - - - Discussion Led by:
J. P. Brown, County Agent,
Salisbury, Maryland.

Relation to Federal Act.

Other Methods of Securing Reliable Seed Stocks.

Adjournment.